

## Casting: Plaster Mould

### KALMINEX\* sleeves, STELEX\* ZR filter

**Foundry:**  
Eickhoff Foundry GmbH,  
Bochum, Germany

**Opportunities:**  
Improvement of casting yield  
Increased productivity

**Alloy:**  
EN-GJS-400-15 (GGG 40)

**Casting weight:**  
910 kg

**Pouring Weight**  
1064kg

**Pouring temperature:**  
1380 - 1400 °C

**Pouring time:**  
20 seconds

**Moulding process:**  
Industrialised hand mould casting in  
furan resin

#### FOSECO products used:

**KALMINEX sleeves**  
**STELEX ZR Filters**

#### Pouring/filtration practice:

Before:

- Standard downsprue and casting system
- 2 KALMINEX X11/270H sleeves

After:

- Removal of complete downsprue and casting system
- Removal of one KALMINEX sleeve
- Only one KALPUR filter/sleeve – downgate with KALMINEX X11/270H + STELEX ZR Filter Ø 200mm

#### Requirements:

- Pressure tight to 250 bar
- Free of shrinkage cavities
- Free from cracks

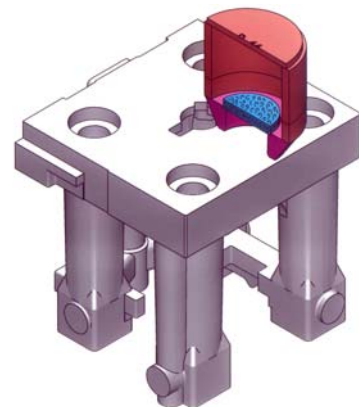
#### Improvements:

- Through KALPUR direct pouring – reduced pattern and cleaning costs
- Increased yield
- Clean casting surface due to filtration

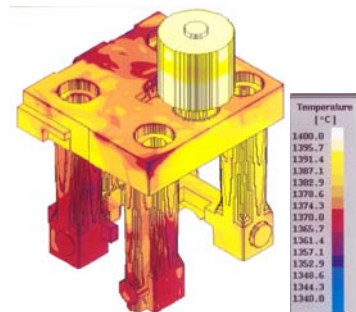
### Key Benefits

#### Cost reduction through:

- Removal of complete downsprue and casting system
- Removal of one KALMINEX sleeve
- Yield = 86%



CAD Model of the base plate with KALPUR Filter sleeves



Temperature distribution after 20 seconds of casting



Finished Casting; 86% yield